M12661

NOVA SCOTIA ENERGY BOARD

IN THE MATTER OF: **The Public Utilities Act**

- and -

IN THE MATTER OF: **An Application by Nova Scotia Power Incorporated for approval of an Extra Large Industrial Dispatchable Above-the-Line Tariff applicable to Port Hawkesbury Paper**

DIRECT EVIDENCE

OF

PORT HAWKESBURY PAPER LP

February 20, 2026

Q. Please state your names and occupations.

A. My name is Bevan Lock, and I am the Co-Mill Manager at Port Hawkesbury Paper ("PHP"). I have worked at PHP since 1996, and in my role as Co-Mill Manager I am one of the two persons responsible for the oversight and general management of the complete PHP Facility (Human Resources, Accounting, Maintenance, and Technical services). I am directly responsible for the Forestry/Woodlands group, Energy Steam & Utilities department, Business Development, and Pulping/Fiber Lines.

My name is John Esaiw, and I am the Energy Director at PHP. I have worked at PHP since May 2023, and I am responsible for leading PHP's continued energy transition. This includes managing PHP's rate structure and tariff related reporting and management, leading all regulatory related efforts, relationship management lead with multiple functional areas of Nova Scotia Power Inc. ("NS Power"), managing natural gas supply, GHG reporting and oversight, and leading PHP's involvement in the ongoing IRP. Prior to joining PHP, I worked as the Chief Strategy and Technical Officer for EfficiencyOne and as Director Fuels, Energy and Risk Management for NS Power.

Q. Please describe Port Hawkesbury Paper LP ("PHP")

A. PHP is a pulp and paper manufacturing facility located in Richmond County, which operates a thermomechanical pulping facility and produces various printing and writing paper grades. The Port Hawkesbury mill site was first developed in 1962, with the start-up of a sulfite pulp mill. Within ten years, the mill added a newsprint machine and continued to manufacture newsprint and pulp for the next three decades. In 1998, the Port Hawkesbury site expanded again by investing $850 million on a state-of-the-art supercalender (SC) paper machine. In 2012, the mill at Port Hawkesbury was purchased by Stern Partners and reopened as Port

Hawkesbury Paper. The company employs about 325 people directly, and another 900 working as contractors.

The SC machine (PM2) produces papers for use in catalogs, magazines, retail inserts, and specialty paper (including book grade and food wrap paper). Modern equipment, in combination with highly skilled employees, make the facility one of the premier paper manufacturers in the world. In addition to the supercalender machine, the facility has multiple thermomechanical pulp (TMP) lines to supply high-quality fiber to the paper machine.

A sister company to PHP, Port Hawkesbury Paper Wind Ltd. ("PHP Wind"), is constructing the largest wind farm in Nova Scotia, the Goose Harbour Lake wind project, which will add 168MW of wind generation to the grid in 2026.

Q. Please describe in general terms the operations carried on by PHP.

A. PHP has three distinct but fully integrated parts of its operations. These include Woodlands and associated forestry operations, thermomechanical pulp (TMP) production that utilizes the wood chips produced from its forestry operations or procured from Nova Scotia sawmills, and the Paper Machine that includes the supercalender process, however some new products such as book grade paper do not require the supercalender process. PHP also has a significant focus on sustainability of its forestry operations and manages 523,000 hectares of public lands.

PHP operates 365 days a year and manages its production to satisfy customer orders that are shipped via train, truck and marine shipping container. Logistics are a significant part of the operations once the paper is produced. PHP regularly produces hundreds of various paper roll configurations; rolls differing in size (width), grade (weight), core (diameter), and finish. Simply put PHP's paper is not a "one size fits all" commodity type product, as we customize our paper to meet a

wide variety of unique customer needs. This means PHP is constrained in manufacturing paper on a "pre-make" basis due to the custom nature of its customer needs and their orders, and this can make logistics challenging if trucks and train cars are sitting idle waiting for production during times when PHP is unable to get the energy it needs.

PHP is fully integrated with NS Power's Port Hawkesbury Biomass Plant operations due to the steam needs of the mill being provided from the PB3 boiler that NS Power owns and operates. PHP also has its own backup boiler, PB4, that is operated when PB3 is unavailable. PHP and NS Power coordinate many elements of their operations and staff of each organization work closely together throughout the site.

Q. Please describe PHP's energy requirements.

A. Port Hawkesbury Paper is Nova Scotia's largest industrial electricity consumer, with energy demand significant enough that in some instances the mill's load can represent up to 25% of the provincial power grid. PHP's energy requirements are closely tied to the order book for paper which has its own seasonal fluctuations depending on when PHP's customers require their paper to be delivered. PHP requires energy around the clock on a 24x7 basis. Even when the mill has no pulp production lines or paper machine running there is approximately 12MW of demand on site, that includes approximately 4MW that are needed to maintain the shared services required for the NS Power Port Hawkesbury Biomass Plant.

Day Ahead 7 Day (DA) and Real Time Intra-day (RT) schedules are created and sent by NS Power (further described in a subsequent response below). The schedules are based on a series of seven separate operating modes (OM's) that PHP can operate its facility with (until the end of 2025 PHP had nine OM's). Each OM has its own associated equipment that has set ranges of required energy to operate within, and this creates the energy requirement at any given time.

PHP and NS Power communicate energy requirements and availability on an annual, monthly, daily and hourly basis that aligns with the Active Demand Control Energy Supply Protocol. PHP and NS Power also meet weekly to discuss current system conditions, energy requirements and any planned or unplanned changes to the expected energy deliveries for a given time period, generally in one-month increments.

Q. Please explain the nature of the Tariff that PHP currently takes service under from NS Power at a high-level.

A. As stated in the NS Power 2026 AAR Application Appendix G1:
"The Extra Large Industrial Active Demand Control Tariff (ELIADC) provides a mechanism whereby Port Hawkesbury Paper LP (PHP, the Mill, the Customer) pays the forecast incremental costs of its annual forecast service expressed as a levelized Customer Baseline Load (CBL) plus makes a contribution to utility costs, while providing Nova Scotia Power (NS Power) with control of PHP's load such that NS Power's overall system costs can be reduced and system reliability can be improved for the benefit of all NS Power customers. NS Power shall be entitled to actively manage PHP's load in accordance with the terms and conditions set out in the Active Demand Control – Energy Supply Protocol…."

Q. Please summarize PHP's experience in taking service under the ELIADC Tariff.

A. PHP has been taking service under the ELIADC Tariff starting in 2020. Since taking service under this unique tariff structure PHP has provided benefits to all Nova Scotians as the largest and most flexible single load in the province. Being a fully dispatchable load, much the same as a dispatchable power generation facility, comes with its own unique challenges and opportunities.

PHP has made its load available to be actively managed by NS Power Fuels, Energy and Risk Management ("FERM") and the NSPSO according to the Active Demand Control Energy Supply Protocol. DA and RT Schedules can range from longer periods of stable load level, to being dispatched down to base load[1] for days at a time and not knowing the exact timing of when PHP will have available power to produce paper. PHP is subject to the unpredictable hour to hour changes impacting the grid that include forced outages of generation facilities, available capacity on neighboring interties as well as intertie transmission facilities tripping off, weather that impacts availability of hydro and wind, storms that impact all parts of the system, power generation facilities being derated, and high provincial loads that can continually limit availability of power to serve PHP.

PHP also experiences equipment failures in part due to continuous starting and stopping of equipment that creates wear and tear that would be lessened if PHP were able to run for continuous periods without being frequently moved around in load. The mill has adapted to dispatch uncertainty throughout its operations. Decision making and planning in this environment is difficult. Consequences of not having energy supply predictability for the next several days impede decisions on what paper to make, whether PHP should begin needed maintenance and repairs, how much staff to bring in, and all this with potential risk of pulp sitting in silos that deteriorates and can become unusable.

PHP has needed to become highly adaptable in its operations to accommodate the tariff structure. Over the years since the ELIADC inception PHP has observed that its load, in addition to NS Power FERM's hourly dispatch for optimal economic dispatch, has been used NSPSO. As presented to stakeholders July 26, 2023 NS Power has stated that: *"…Active Demand Control has provided a valued tool in managing supply and demand balance, particularly when real-time operations do not go as planned. The ability of PHP to respond to Operator dispatch requests in*

[1] Base load and house load are interchangeable terms used for when PHP is at its lowest load level with no production lines or paper machine running

a timely manner has helped avoid exceedances of system operating limits, and also to maintain operating reserves."[2] PHP understands that through the ADC component of the tariff it is providing a service to the NSPSO and is part of the reserve needed to help maintain reliability on the grid and can move its operating lines in essentially a moment's notice when needed for overall grid management. If this practice is expected to continue, an improved tariff protocol will be required, if PHP chooses to move to the ELID tariff.

Q. Please describe how the dispatch of PHP's electricity load is managed by NS Power and PHP under the ELIADC Tariff.

A. NS Power, the NSPSO, and PHP are all highly coordinated in the dispatch of PHP's load. The Active Demand Control Energy Supply Protocol (ESP) to the Tariff provides the detailed process that each entity follows. In general terms, NS Power FERM sends DA and RT schedules to PHP and NSPSO simultaneously. The DA schedule is sent once a day, except weekends where the DA covers the weekend plus Monday. RT schedules are sent frequently throughout the day so all three parties are aware of what to expect in the next several hours. RT schedules can be sent more frequently if system conditions are rapidly changing and the most recent RT schedule supersedes any previous RT schedule.

NS Power is running its own software to determine what energy is the most economic energy available to serve PHP in advance of sending DA and RT schedules. According to the ESP Part B (5), "If, during the Current Hour, Hour 1 and/or Hour 2, system conditions change unexpectedly such that they have a material impact (positive or negative) on system costs, NSPSO will contact PHP with a schedule change (an increase or reduction in demand)…". These events are separately tracked as schedule variance and cause code reporting is documented.

[2] Matter M11301, Exhibit N-1, Application at Appendix C, Page 10.

If additional energy is available that is outside of the RT schedule, as requested by PHP from time to time, and is mutually agreeable, PHP can run on incrementally available energy.

Should PHP experience any equipment failures or other circumstances that prevent it from meeting its dispatch, the NS Power marketing desk and the NSPSO is notified and schedules are adjusted accordingly. Should PHP have any immediate or longer term expected operating constraints, such as real time equipment failures that require extended periods to repair, it sends a "discrete line" notification to NS Power and NSPSO that communicates the restricted OMs for any given time frame such that NS Power and the NSPSO have the same information for their planning purposes.

Q. Please explain why PHP is interested in NS Power's Application for an Extra Large Industrial Dispatchable Above-the-Line Tariff.

A. PHP is currently a below-the-line customer that is billed for the highest priced marginal energy on the Nova Scotia system for every hour of the year. This marginal pricing generally has a seasonal shape to it with higher priced energy in the winter and lower priced energy in the shoulder (spring and fall) and summer months. However, there can be times where the pricing is highly volatile and unpredictable depending on system conditions, transmission outages, forced unit outages and derates, etc. This creates challenges for the mill in meeting orders at certain times of the year when power availability is uncertain. PHP also sells its paper in advance of knowing the actual cost of energy to produce that paper. Moving to an appropriate above-the-line Tariff will provide PHP greater within the year certainty and predictability of its energy cost. PHP is considering the tradeoff of greater stability of its power price against the risk and high volatility of marginal hourly pricing (which can at times be favorable vs fixed price power and at times significantly unfavorable).

As noted, PHP is soon entering a new era for its operations that will include the Goose Harbour Lake wind facility. This facility will provide the most significant single addition of wind to the Nova Scotia grid in its history, while providing the mill with a significant portion of energy. The wind will be fixed at a price within the Power Purchase Agreement ("PPA"), as approved by the Minister, that supports PHP's need to lower the cost of its most significant input to its operations. In combination with the wind PPA, PHP is seeking greater certainty in its annual price for non-wind resource electricity and to reduce risk from the vagaries of being a below-the-line marginal customer where electricity prices can vary widely from what is forecast by NS Power. More certainty and predictability in electricity pricing provides confidence to the business when selling its product. The approval of an appropriate above-the-line tariff would give an option to PHP to move to a more certain price structure while continuing to invest in the mill for the long term.

Q. Does PHP agree with the proposed Above-the-Line Tariff as filed by NS Power on December 29, 2025?

A. No. PHP has the following specific areas of concern with respect to the proposed Above-the-Line Tariff:

(1) the use of a 57,000 kW winter month system coincident demand for PHP interruptible load; (2) the value of the proposed Interruptible credit, if the Board finds that PHP interruptible load should be greater than 0 kW; (3) the use of a Revenue-to-Cost ("R/C") ratio of greater than 1.0 for a new Above-the-Line Tariff; and (4) the forecast energy requirements for PHP in 2026 and 2027 used in calculating the new Above-the-Line Tariff do not reflect the most updated assumptions.

Technical and regulatory considerations with respect to these four issues are addressed in more detail in the evidence of Brubaker and Associates, consultants to PHP, filed contemporaneously with this evidence.

Q. Please provide further details regarding PHP's operations during the time of NS Power's winter month system coincident demand peaks over the past number of years.

A. PHP cannot anticipate the exact timing of when a peak load hour will occur. PHP is sent regular schedules by NS Power and PHP relies on NS Power and the NSPSO to dispatch its load according to the conditions that exist on the system. PHP has no direct incentive to avoid system peaks nor is PHP able to have any knowledge in advance of what actions NS Power or NSPSO may take during a peak hour, if any. The ELIADC was not designed to specifically be a peak avoidance tariff. The ADC and Priority Interruptible mechanisms inherent to the ELIADC tariff are in place such that at any time PHP's load can be reduced, if needed, during any peak load event. In fact, when PHP's load is reduced in advance of a peak load hour, then PHP is acting as a buffer to avoid the system peak. PHP may be contemporaneously running during a peak hour; however, it is unknown at the time if, in fact, the peak hour is being established. At any time, the NSPSO can instruct PHP to reduce its load, and if necessary, can employ the priority interruptible mechanism, should PHP's load be required to drop when energy is not available to serve PHP load. For these reasons it is not appropriate to determine a demand charge based on PHP's historical load levels during coincident peak hours. The essence of the ADC and priority interruptible protocol is that NS Power and NSPSO have the tools they need to dispatch PHP load at any time to avoid peak load reliability events on the system.

Q. How do the forecast energy requirements included in NS Power's proposed Above-the-Line Tariff compare to PHP's current forecast?

A. PHP's annual forecast energy requirements based on the most recent information provided to NS Power are lower than what was provided for modelling purposes for the recently filed GRA. PHP has an active order book that has fluctuations from

year to year, that impacts the annual power demand of the mill. Forecasting the required amount of annual energy for more than one year in advance is challenging due to the nature of the paper market. For the current year NS Power AAR filing in 2026, PHP provided a forecast of just over 774,000 MWh. This forecast was given to NS Power for 2026 and an identical forecast was provided for 2027. In terms of generation from PHP Wind, PHP is currently forecasting 154,610 MWh in 2026 and 507,400 MWh in 2027.

Q. How will the dispatch of PHP's load change under the Active Demand Control Protocol if PHP takes service under an Above-the-Line Tariff?

A. PHP assumes that the ADC component of the ELID tariff and its associated protocol will remain mostly intact, with some needed amendments. PHP will make its load available to NS Power and the NSPSO for dispatch and function much the same as the ELIADC tariff. PHP will also remain priority interruptible on top of being dispatchable. PHP understands that some of the reporting will change with respect to the ELID ADC component of the tariff, such as cause code reporting that will no longer be required. PHP also understands that the system operator is intending to move to electronic dispatch of PHP load. This component of the dispatch protocol will need to be addressed in advance of the system operator having the systems in place to do so. The NSPSO will need to work with PHP to develop appropriate processes and documentation.

Q. Does PHP have an active energy conservation program?

A. Yes. PHP continues to actively pursue a variety of energy saving projects. These include (but are not limited to) process improvements, making its operating lines more efficient, seeking out opportunities for energy savings through, for example, piping insulation, lighting, and reduction of all loads that are able to shut down when PHP is dispatched to house load (and using established checklists and data dashboards to monitor these loads). PHP is also running with two lines in its most

recent Operating Modes (OMs) instead of having all three lines running, as its lines one and three are much more energy efficient than line two. Line two is now mostly engaged as a backup line and is remaining fully operational when needed. PHP also increased line 3 production by debottlenecking two-stage refining. PHP employs a group of process engineers that actively seek process improvements throughout the mill that reduce energy use.

Q. Please provide an update on the status of the PHP Goose Harbour Lake Wind Farm Project.

A. The project is currently on schedule and the first significant phase of construction is completed including roads, foundations and tower bases. Ongoing construction of the substation, and the operations and maintenance building are progressing as is the installation of poles to accommodate the distribution system. All wind tower components including blades, nacelles, towers, etc have all been completed and are awaiting shipping in the spring of 2026. The laydown area is completed and PHP has ample availability of space to accommodate all components for delivery. PHP expects to have its first circuit of wind (42MW) available to provide electricity to the grid in late Q3/early Q4 with full commercial operations achieved by December 2026.

Q. Please provide your understanding of how an Above-the-Line Tariff will work in conjunction with the PHP Wind Project at Goose Harbour Lake.

A. An above-the-line tariff in conjunction with PHP Wind will provide PHP with fixed cost energy throughout the year. The consumption of energy at the mill will be tracked as it is today. PHP Wind will be connected to the Nova Scotia grid and is not directly connected to the mill. Through the Power Purchase Agreements in place with NS Power issued by the Province, PHP will also track the energy produced by the wind facility. PHP will continue to be billed weekly, and throughout the year the energy consumed by the mill will be netted off with the

energy produced by the wind facility such that PHP's final bill for the year from NS Power will be the net of mill energy minus the wind energy, multiplied by the NS Power tariff per MWh energy price plus/minus any associated additional cost/credit components of the applicable tariff.

Q. If the Board approves the proposed Above-the-Line Tariff as filed by NS Power without addressing the areas of concern noted by PHP, how will PHP proceed?

Unless PHP's areas of concern are addressed by the Board in a satisfactory manner it is unlikely PHP will proceed to accept service under the ELID tariff. PHP would need to undertake the development of a below-the-line tariff with NS Power that meets the mill's needs if it chooses to not accept service under the ELID.

Q. Aside from ADC and being priority interruptible, are there other aspects of PHP's load flexibility that are not properly being captured in the ELID tariff filing?

A. Yes. For example, on February 13, 2026 at approximately 4:31 PM the Maritime Link tripped offline and separated Nova Scotia from Newfoundland. The NSPSO contacted PHP and instructed us to drop a line and PHP reduced load by approximately 60MW. This was neither a real time (RT) schedule dispatch nor an NSPSO call for interruption. The RT hourly dispatch sent by NS Power did not have this anticipated drop in the tie line, nor did the NSPSO use the interruption protocol specified in the ELIADC tariff. PHP simply complied with an instruction to drop load. The New Brunswick tie line acted as designed and the shock of the trip was absorbed by the New Brunswick system. The system was then restored within the hour without the Maritime Link, and PHP played a significant part in this event. Other similar events were shared with interveners at a July 26, 2023 meeting in support of NS Power's Application for the approval of a subsequent

term for the ELIADC Tariff .[3] Nova Scotians were unaware of such a significant event on the grid. The same can be said for the multiple forced outages of NS Power generation facilities that have been forced offline due to immediate need to shut down for repairs. These events go unnoticed by the public, yet time and again PHP is called upon as a resource for system reliability that is in a grey area between ADC real time dispatches and the NSPSO interruption protocol. There is a need to consider this additional ancillary service value, that is in addition to the ADC value and the priority interruptible value associated with any ATL tariff, as part of the approval of a new ATL Tariff for PHP.

Q. Does this conclude PHP's direct evidence?

A. Yes.

[3] See Matter M11301, Exhibit N-1, Application at Appendix C, Pages 1-14